December 31, 2007

The Honorable Larry Gossett Chair, King County Council Room 1200 C O U R T H O U S E

Dear Councilmember Gossett:

This transmittal report, entitled "Voting System Progress Report and Tabulation Contingency and Mitigation Plan" is provided to council members in response to the Motion 2007-0402, section J., as adopted on July 30, 2007:

- *J. By December 31, 2007, the executive shall report to the council on:*
 - 1. The feasibility of implementing the council's preferred course of action as stated in subsection B of this motion, to conduct all-mail elections in 2008 using current equipment, augmented with additional equipment, security measures, staff and resources. If the executive finds the council's preferred alternative infeasible, the report shall detail the reasons for this conclusion;
 - 2. The status of certification, testing and acquisition of new ballot tabulation equipment and software, including the steps taken and planned for ensuring high security standards, accuracy, transparency and staff training; and
 - 3. Processes, documentation and procedures for mitigating the limitations of current elections equipment, software and security protocols.

When the Council passed Ordinance 15523 on June 19, 2006, making King County the largest jurisdiction in the nation to conduct all-mail elections, it provided the commitment and vision to transform the way we conduct elections. As requested by council, this comprehensive analysis explores the impact of moving to vote by mail in 2008 using the county's current tabulation system and recommends against such a course of action. Instead, the report concludes the risks of using mitigation strategies to remedy the limitations of current tabulation equipment outweigh the gains of transitioning to vote by mail using new equipment, an essential element in the future success of King County's transition to all-mail voting in 2008.

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First, the attached report provides a status update on the federal certification process for the Premier Election Solutions (formerly Diebold) Assure 1.2 tabulation system, purchase of which was recommended in the Information Technology Business Case submitted by King County Elections to the Council on March 30, 2007.

Federal certification was originally expected in October 2007 but additional security enhancements were made in response to the California and Florida election system security reviews, creating a delay in federal certification until early January 2008. Although delaying certification, these enhancements and security features further enhance Premier's voting system against security threats and inside attacks, and result in the best and most secure product available and suitable for a jurisdiction the size of King County.

King County Elections is on schedule to receive the federally certified equipment; perform the necessary security review and testing; and phase-in the tabulation system in a small special election in May 2008. Full implementation of vote by mail with the upgraded tabulation system will occur in August 2008.

The security review of the Premier Elections Solution Assure 1.2 voting system will be performed within the parameters of a real-world elections environment in King County following federal certification. This security review is two-fold and will identify security threats and vulnerabilities along with developing and documenting mitigation strategies to maintain public trust and confidence in the voting system.

Second, the King County Elections' tabulation contingency and mitigation plan report explores the possibility, feasibility, restrictions, and issues of conducting all-mail elections in 2008 using current tabulation equipment purchased in 1998, with strategies to mitigate the processing limitations of the existing system.

With the exception of placing Precinct Committee Officer (PCO) candidates on a separate ballot, each of these options described in greater detail below can be performed individually to mitigate the database size as part of an emergency contingency plan to prevent data loss or to complete an election. However, these emergency options have never been combined and piloted in an election; leaving the risks, possible legal implications, and impact to public perception and the perceived accuracy of the vote totals unknown.

The following is a brief summary of the four strategies used to mitigate database size explored in the attached report:

1. Splitting the database

King County Elections has developed a contingency plan to invoke if necessary but has not planned nor recommended using this contingency as the Council's "Plan B" suggests to achieve all-mail voting by 2008.

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Under the current emergency contingency plan, once the first database reaches a predetermined threshold, it would be saved and a second database created to finish tabulation, possibly for a few days. Each evening, the results of the two databases would be combined outside the certified system for nightly posting of results. Using an emergency contingency plan as a "Plan B" would require elections to split the database in the beginning and operate two databases for the entire 15 or 21 day tabulation period versus a few days.

Although splitting the database is technically possible, it is not recommended. In addition to the Secretary of State's technical expert concurring in this assessment, every election official consulted, both technical and election management, believes this is not an advisable approach. King County Elections knows of no other jurisdiction that plans on splitting their database as part of its standard operating procedures for conducting an election.

2. Adding additional tabulation machines

King County Elections' current tabulation system is 15-year-old technology that has been in operation for nearly 10 years. The equipment was originally designed to operate in a decentralized precinct-based environment, at polling places.

King County Elections currently uses the AccuVote tabulators at the polls and in a central count environment with the addition of automatic document feeders for higher processing rates. Firmware chips required to convert the current polling place AccuVotes to central count are available while feeders necessary to process the higher volume of mail ballots are no longer manufactured and spare parts are not available. Use of an AccuVote without a feeder would result in the need to individually, handinsert each ballot into the tabulator, a tedious, labor-intensive process increasing the opportunity for errors to occur.

While augmenting the current central count environment with converted polling place AccuVotes is possible, the operational and technical complications and low output outweigh the desired benefit of increased result reporting. Using additional tabulators would alleviate some of the volume constraints placed on using the current equipment in a vote-by-mail environment. These volume constraints are eliminated when upgrading the recommended Premier tabulation equipment.

3. Placing precinct committee officers on a separate ballot

The presence of precinct committee officers (PCOs) on the ballot will cause the tabulation database to split when a third more absentee ballots are added in an all-mail voting system. King County has over 2,500 precincts resulting in over 5,000 PCO races, each requiring a unique ballot style.

PCO races are partisan races and can only be counted if the party of the selected PCO candidate matches the party preference selected by the voter or if the voter voted

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consistently for one particular party line. Once the PCO ballot is separated from the larger ballot, the link to the party selection is severed with no way to prove that the PCO selection is valid, as required by primary election laws.

The placement of PCO races on a separate ballot is a technically possible option with the current tabulation system; however, because of the legal intricacies of the current pick-a-party primary, it is not operationally or legally feasible.

4. Adding a second tabulation shift

The November 2008 General Election promises record turnout, with King County Elections projecting more than 900,000 ballots returned. Due to the increased volume of ballots to be processed in a vote-by-mail environment, additional shift work is already planned for the signature verification, opening, and duplication processing phases; however, shift work will not be necessary for tabulation if new equipment is implemented.

King County's current best practice contends that each shift at each stage of processing go through a thorough reconciliation and identify and rectify any inaccuracies. Additional shifts of tabulation staff will require additional reconciliation efforts to occur within the same condensed certification timeframe required by statute.

While the addition of another tabulation shift is possible and more feasible than the other recommended mitigation strategies; however, the stretching of existing human resources needed to manage and support each shift and achieve accurate results is a significant risk. The addition of another shift would dilute the pool of experienced tabulators and lead workers to tabulate and perform the reconciliation, leading to a potential decline in the quality of the process and results.

In the past few years King County Elections has made great strides in improving performance and building public trust, confidence and transparency in our Elections process. In a thorough analysis of the Council's preferred option of using the current tabulation equipment in a vote-by-mail environment, this option was proven counter effective with significant risk. This untested method puts the cultural improvements, benchmarks and best practices King County Elections has achieved since 2004 at risk.

Given the certification process and a December 14 update from the independent testing lab that certification is progressing, King County Elections is confident that the transition to vote-by-mail is on schedule. If, however, certification is not achieved by early February, it is the recommendation of King County's election professionals that the county wait to transition to all-mail voting in 2009. Equipment could still be certified and installed for use in 2008, but vote by mail should be postponed until 2009.

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Sincerely,

Ron Sims King County Executive

Enclosures

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